Climatic Data

Climate is an important factor in the processes that affect soil, water, air, plant, and animal resources. Nearly every conservation practice is dependent on weather or climate. NRCS staff and other professionals providing natural resource conservation technical assistance need climatic data to plan, design, and implement conservation measures. The NRCS National Water and Climate Center Field Office Guide to Climatic Data (http://www.wcc.nrcs.usda.gov/climate/foguide.html) includes descriptions of the climatic data oriented to the NRCS role in natural resource conservation and provides recommendations on the most appropriate climatic data to use in conservation practice application.

Climatic data provided here is from three primary sources:

1. Total Rainfall and Rainfall Frequency Data (Michigan Monthly Precipitation by County, and Michigan 24-Hour Precipitation by County)– The 24-hour rainfall amounts by county are for the 2-, 5-, 10-, 25-, 50-, and 100-year frequency storms . This data is consistent with the *Rainfall Frequency Atlas of the Midwest, Illinois State Water Survey, Bulletin 71 (Huff and Angel, 1992)*, as required by the National Pollutant Discharge Elimination System (NPDES) Permits for Concentrated Animal Feeding Operations (CAFOs) in Michigan.

2. Information from NOAA Regional Climate Centers (RCCs) – Applied Climate Information System (ACIS) The AgACIS product within ACIS (http://agacis.rcc-acis.org) was developed by USDA-NRCS to provide climatic data and analysis needed by NRCS and others providing conservation technical assistance. The table-based information for each Michigan county includes:

   WETS (Wetlands Determinations) – The WETS table provides a month-by-month summary and probability analysis of temperature and precipitation. The table also provides average length of growing season using three index temperatures (32, 28, and 24 degrees Fahrenheit) at 50 and 70% probabilities.

   TAPS (Temperature and Precipitation Summary) – The TAPS table provides a month-by-month summary and probability analysis of temperature and precipitation.

   FROST (First and Last Frost Date Analysis) – The FROST table provides information on the average date of the last temperature below 24, 28, and 32 degrees Fahrenheit in the spring, and the average date of the first temperature below 24, 28, and 32 degrees Fahrenheit in the fall, at probabilities of 10, 20, and 50%.

   GROWTH (Growing Season Length) – The GROWTH table provides average length of growing season using three index temperatures (32, 28, and 24 degrees Fahrenheit) at 10, 20, 50, 80, and 90% probabilities.

The AgACIS web page will prompt for an office ID which is the 5 digit Federal Information Processing Standard (FIPS) county code. Enter the county FIPS code and then click on the submit button. The FIPS map for Michigan is in Section II of the Field Office Technical Guide under Climatic Data. FIPS codes for all states can be found at: http://www.nws.noaa.gov/mirs/public/prods/maps/cnty_fips_list.htm

Additional products are also available on the AgACIS site. Searches for additional weather stations can be done at the NOAA Climatic Data Center (http://www.ncdc.noaa.gov/cdo-web/search).

3. The map-based County Weather Forecast for Michigan (http://www.crh.noaa.gov/grr/nowmap2.htm) provides current weather conditions, a 5-day forecast, and notices of hazardous weather potential from the National Oceanic & Atmospheric Administration (NOAA).